

## I. AMENDMENTS

### **In the Specification:**

Please amend the CROSS-REFERENCE TO RELATED APPLICATIONS beginning on page 1, after the title, as follows:

~~{0001}~~ [0000.1] This application is a division of Application No. 10/196,474, filed July 15, 2002, now Patent No. 6,719,705, which is a division of Application No. 09/684,104, filed October 6, 2000, now Patent No. 6,537,225, which claims benefit of U.S. Provisional Application No. 60/158,097, filed October 7, 1999.

Please replace Paragraph [000125] with the following amended paragraph:

[000125] ~~Place~~ According to the invention, place a probe such as that shown in Figure 1 on a finger. Make measurements of both total absorbance and pulsatile absorbance. Raise the probe a known distance. Again measure both total absorbance and pulsatile absorbance. Both will be decreased. This is because the pulse amplitude is less because the arterial blood pressure within the probe is less (due to decrease in hydrostatic pressure). When the rate of change of the absorbance changes by a predetermined amount, representing an abrupt decrease, central venous drainage has been reached. ~~However, the total absorbance will also decrease, as the distending pressure in the venous system is less, and hence the veins and venules are smaller. All changes in absorbance can be assumed to be due to changes in blood volume. Saturation is calculated using the ratios of absorbance of distinct wavelengths.~~

Please add the following new paragraph after paragraph [000125]:

[000125.1] When the probe is raised, the total absorbance will also decrease, since the distending pressure in the venous system is less and, hence, the veins and venules are smaller. All changes in absorbance can be assumed to be due to changes in blood volume. Saturation is calculated using the ratios of absorbance of distinct wavelengths.

Please replace Paragraph [000126] with the following amended paragraph:

[000126] In ~~[[one]]~~ a further embodiment, the central venous pressure (CVP) can be estimated. A first probe containing a position sensor is ~~place~~ preferably placed level with a patient's heart. A second probe, such as the one shown in Figure 8, also comprising a position sensor is placed on the patient's finger. The patient initially positions the arm so that the second probe is ~~initially~~ lower than the first probe. The total absorbance measured at the second probe is continuously monitored~~[[. The]]~~ while the patient's arm is slowly raised~~[[,]]~~, ~~and the~~ The rate of change of absorbance of the second probe is computed with respect to the relative displacement to the first probe. When the rate of change changes by a predetermined amount, representing an abrupt decrease, the arm position corresponding to the point of central venous drainage has been reached. The CVP can then be calculated by computing the hydrostatic pressure difference between the first probe and the second probe at that arm position. The circuitry shown in Figure 13 is suitable for use with this embodiment.